

ICS 23.100.10
CCS J 20



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 47871-2026

**Aerospace fluid systems and components - General
specifications for variable displacement hydraulic motors**

航空航天流体系统和部件 变量液压马达通用规范

(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
4 Categories
5 General Requirements
5.2 Hydraulic System Characteristics
5.3 Airworthiness Regulations
5.4 Identification
6 Functional Requirements
6.1 Hydraulic oil
6.2 Pressure
6.3 Traffic volume
6.4 Rotation speed and direction of rotation
6.5 Nm of torque
6.6 Variable Output Load Control
6.7 Overall motor efficiency
6.8 Dynamic Characteristics
6.9 Follow-up operation
6.10 Oil and ambient temperature
6.11 Noise Level
6.12 Durability Test
6.13 Environmental Requirements
7 Detailed Design Requirements
7.1 Dimensionally critical components
7.3 Seals
7.4 Lubrication
7.5 Balance
7.6 Inclusive Failure
7.7 Lead seal
7.8 Electrical connection
7.9 Marked

8	Strength requirements
8.1	General Requirements
8.2	Pressure resistance
8.3	Burst Pressure
8.4	Pressure Pulse (Fatigue)
8.5	Hydraulic interface strength
9	Structural Requirements
9.1	Materials
9.2	Corrosion Protection
9.3	Castings
10	Installation Requirements
10.1	Size
10.3	Installation
10.4	Rotation direction
10.5	Drive shaft
10.6	Interface
11	Maintenance Requirements
11.1	Maintenance Strategy
11.2	Lifespan and Storage Requirements
12	Reliability Requirements
12.1	Equipment Compliance
12.2	Requirements
13	Quality Assurance Regulations
13.1	Inspection Responsibility
13.2	Inspection Classification
13.3	Test bench requirements
14	Quality consistency inspection
14.1	General Requirements
14.2	Product Inspection
14.3	Inspection Procedures
14.4	Storage and Packaging
15.1	General Rules
15.2	Identification Procedures
15.3	Qualification Tests
	References

Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting is scheduled.

This document is modified to adopt ISO 22181:2021 "General specification for variable displacement hydraulic motors in aerospace fluid systems and components".

The technical differences between this document and ISO 22181:2021, and the reasons therefor, are as follows.

--The scope has been changed (see Chapter 1), and the specific technical content and scope of application specified in this document are described in accordance with the requirements of GB/T 1.1;

--Delete "should" in note 3.11.4 and "should" in note 3.12.2 (see 3.11.4 and 3.12.2) to adapt to my country's technological conditions;

--The normative references GB/T 30206.1, GB/T 30206.2, and GB/T 30206.3 have replaced ISO 8625-1, GB/T 30206.1, GB/T 30206.2, and GB/T 30206.3, respectively.

ISO 8625-2 and ISO 8625-3 (see Chapter 3) replace ISO 3323 (see Chapter 3) with the normatively referenced GB/T 30213.

7.9.3), to adapt to my country's technical conditions and the latest technical requirements, and to facilitate the application of this document;

--Added normative reference to HB 6167.15 (see 6.13), and removed normative reference to ISO 2671 to adapt to Chinese technology.

Conditions and the latest technical requirements facilitate the application of this document;

--The style and marking requirements for nameplates have been changed (see 7.9.1) to adapt to my country's technical conditions and the latest technical requirements, and to facilitate this document.

Applications.

The following editorial changes have been made to this document.

--Added terms such as "interface" and their entry numbers (see 3.5, 3.6, 3.7, 3.7.5, 3.7.6, 3.11);

--Added footnotes to Table 4 to explain the meaning of "-", "-", and "or" in the table;

--ISO 8081 has been replaced by GB/T 47038, which is cited in the informational reference.

Please note that some content in this document may involve patents. The issuing

organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Aircraft Standardization Technical Committee (SAC/TC 435).

1 Scope

This document specifies the general requirements, functional requirements, detailed design requirements, strength requirements, and structural requirements for aerospace variable displacement hydraulic motors.

Installation requirements, maintenance requirements, reliability requirements, quality assurance regulations, quality consistency inspection and verification inspection.

This document applies to variable displacement hydraulic motors (hereinafter referred to as "variable displacement motors") with a rated operating pressure of 35 MPa and below in aerospace hydraulic systems.

The research, development, production, testing/inspection and delivery of "motors".

2 Normative references

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 30206.1 Vocabulary for Aerospace Fluid Systems Part 1: General Terms and Definitions Related to Pressure (GB/T 30206.1-2026, ISO 8625-1:2018, IDT) GB/T 30206.2 Vocabulary for Aerospace Fluid Systems Part 2: General Terms and Definitions Related to Flow Rate (GB/T 30206.2-2026, ISO 8625-2:2018, IDT) GB/T 30206.3 Vocabulary for Aerospace Fluid Systems Part 3: General Terms and Definitions Related to Temperature (GB/T 30206.3-2026, ISO 8625-3:2018, IDT) GB/T 30213 Marking of hydraulic fluids used in aircraft hydraulic accessory identification accessories (GB/T 30213-2013, ISO 3323.

1987, IDT)

HB 6167.15 Environmental conditions and test methods for airborne equipment of civil aircraft - Part 15: Acoustic and vibration tests (HB 6167.15-2014, ISO 2671:1982, IDT) ISO 2093 Electroplated coatings of tin - Specification and test methods ISO 2669 Environmental tests for aircraft equipment - acceleration tests (state acceleration) ISO 2685 Aircraft-Airborne Equipment Environmental Test Procedures - Fire resistance in specified fire zones (dure for airborne equipment to fire in designated fire zones) ISO 3601-1 Fluid Dynamic Systems - O-rings - Part 1: Inner Diameter, Cross Section, Tolerances and Markings power systems-O-rings-Part 1: Inside diameters, cross-sections, tolerances and designation codes) cedures for airborne equipment) ISO 7320 Dimensions of threaded and